



The Engineering Faculty of Firat University, Elazig, Turkey
and
Applied Automation and Industrial Diagnostics Laboratory,
Faculty of Science and Technology, University of Djelfa, Algeria

Program

The 3rd International Conference on Applied Automation and Industrial Diagnostics (ICAAID 2019)

Elazig 25-27 September 2019, Turkey

First Day
25/09/2019



8h – 9h00	Registration
09h00 – 09h30	Opening Ceremony <i>Mimar Sinan Hall</i> <i>Prof. Sedat Sunter (General Chair)</i> <i>Prof. Abdellah Kouzou (General Chair)</i> <i>Prof. Mustafa Poyraz (Chair, Electrical - Electronics Engineering)</i> <i>Prof. Ahmet Özer (Dean, Engineering Faculty)</i> <i>Prof. Kutbeddin Demirdağ (Rector, Firat University)</i>
09h30 – 10h20	Plenary Session 1 <i>İbn-i Sina Hall</i> GRID-CONNECTED SOLAR PV INVERTERS-CHALLENGES AND REQUIREMENTS <i>Professor Atif Iqbal</i> <i>Qatar University, Doha, Qatar</i> Chairs : Prof. Abdellah Kouzou and Prof. Sedat Sünter
10h20– 10h40	Coffee break - 1
10h40 – 11h30	Plenary Session 2 <i>İbn-i Sina Hall</i> SCADA DATA ANALYTICS FOR FAULT DETECTION AND DIAGNOSIS OF WIND TURBINES ENERGY SYSTEMS <i>Prof. Dr Fausto P. Garcia Marquez</i> <i>Universidad Castilla-La Mancha, Spain</i> Chair : Prof. Hasan Güler



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11h30 – 12h30 Poster Session 1

- ID: 55. Medical Image Segmentation Based on Wavelet Transformation and Level set method.**
Messaouda Larbi (Algeria), Abdelghani Rouini (Algeria), Zoubeida Messali (Algeria), Samira Larbi (Algeria).
- ID: 72. ANN Optimization Using Ant Colony Algorithm for Predicting the Valsartan Sustained Release from Polyelectrolyte Complexes Matrix Tablets.**
Sonia Lefnaoui (Algeria), Samia Rebouh (Algeria), Mounir Bouheddaa (Algeria), M. Madiha Yahoum (Algeria).
- ID: 23. Numerical simulation on Calculation of electromechanical constraints in the isolation of high voltage cable.**
Abdelghani Rouini (Algeria), Abdellah Kouzou (Algeria), Messaouda Larbi (Algeria), Ahmed Hafaifa (Algeria).
- ID: 71. Sentiment Dataset Creation using Multi-Agent System Improved by Deep Learning.**
Redha Mazaari (Algeria), Mounir Bouhadda (Algeria), Oussama Sohaib Mazari (Algeria), Yousra Safa Chaouch (Algeria).
- ID: 87. Type-1 and Type-2 Fuzzy Logic Controllers for Autonomous Robotic Motion.**
Cherroun Lakhmissi (Algeria), Nadour M. (Algeria), Abdellah Kouzou (Algeria).



12h45 – 14:00

Lunch



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14h00 – 15h30 Oral Session 1 *İbn-i Sina Hall*

Chair: Prof. Ahmet Bedri Özer

1. **ID: 09.** *Optimum I-PD Controller Design for Integrating Processes with Inverse Response and Time Delay.*
Ibrahim Kaya (Turkey).
2. **ID: 11.** *TRMS Experimental Results of New Nonlinear PID Tuned by DE Algorithm.*
Fadi Alyoussef (Turkey), Ibrahim Kaya (Turkey).
3. **ID: 18.** *Integral-Proportional Derivative (I-PD) Controller Tuning for Pure Integrating Processes with Time Delay*
Fuat Peker (Turkey), Ibrahim Kaya (Turkey).
4. **ID: 75.** *Quadrotor Based Arduino Design Using PID Control*
Nasreddinne Cherigui (Algeria), Chahrazed Sedini (Algeria), Ismat Meslouli (Algeria), Amal Choukchou-Braham (Algeria), Brahim Cherki (Algeria).
5. **ID: 34.** *A New Analytical Method for Finding the Centroid of Stability Locus for Controlling Integrating Processes*
Fadi Alyoussef (Turkey), Ibrahim Kaya (Turkey).



14h00 – 15h30 Oral Session 2 *Kaşgarlı Mahmud Hall*

Chair: Prof. İbrahim Sefa

1. **ID: 39.** *Artificial Intelligence Supported Tunnel Lighting System.*
Aslı Spor (Turkey), İsmail Kiyak (Turkey), Gülçin Solak (Turkey).
2. **ID: 70** *Traffic Intersection Fuzzy Control and Supervision System based on IoT.*
Mounir Bouhedda (Algeria), Hamza Benyezza (Algeria), Ibrahim Metali (Algeria), Sofiane Tchoketch Kebir (Algeria), Samia Rebouh (Algeria).
3. **ID: 57.** *Fractal modeling of Cyber physical production system using multi-agent systems.*
M'hammed SM Sahnoun (France), Yiyi Xu (France), Belgacem Bettayeb (France), Imen Bouzarkouna (France), David Baudry (France), Anne Louis (France).
4. **ID: 40.** *Radio Propagation Prediction Using SBR in a Tunnel with Narrow Cross-Section and Obstacles.*
Emrullah Gündüzalp (Turkey), Güngör Yıldırım (Turkey), Yetkin Tatar (Turkey).
5. **ID: 50.** *Artificial Intelligence Supported Healthy Unit Hybrid Lighting Control.*
Gülçin Solak (Turkey), İsmail Kiyak (Turkey), Aslı Spor (Turkey).



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15h30 – 16h30 Poster Session 2

- ID: 76. Features Extraction Faults of SCIG-Based Wind Turbine Using Non Parametric Methods.**
Lahcène Noureddine (Algeria), Mustapha Noureddine (Algeria), Ahmed Hafaifa (Algeria), Abdellah Kouzou (Algeria).
- ID: 36. Using PROMETHEE and TOPSIS for prioritizing maintenance actions.**
Mohammed Bouchaala Abdelghani (Algeria), Rachid Noureddine (Algeria), Myriam Noureddine (Algeria).
- ID: 17. Minimizing Makespan on Identical Parallel Machines.**
Habiba Houari (Algeria), Hassam Ahmed (Algeria), Zaki Sari (Algeria), Souad Tahraoui (Algeria), Ahmed Djillali (Algeria), Cherier Mohamed Amine (Algeria).
- ID: 35. An Intelligent Faults Diagnosis and Detection Method Based on Artificial Neural Networks for Photovoltaic Array.**
Aicha Djalab, (Algeria), Ahmed Hafaifa (Algeria), Mohamed Mounir Rezaoui (Algeria), Ali Teta (Algeria), Nassim Sabri (Algeria).
- ID: 69. IoT-Based System for Supervision and Control of a Transmission Center.**
Rachid Benhamadi (Algeria), Mounir Bouhedda (Algeria), Billel Bengherbia (Algeria), Hamza Benyazza (Algeria), Omar Benzineb (Algeria).
- ID: 86. Performance Improvement of Sensorless Vector Control for Induction Motor Drives using Fuzzy-Logic Luenberger Observer: Experimental Investigation.**
Younes Azzoug (Algeria), Arezki Menacer (Algeria), Tarek Ameid (Algeria), Abdelkarim Ammar (Algeria).

16h10 – 16:30

Coffee Break - 2

16h30 – 18h00 Oral Session 3 *Kaşgarlı Mahmud Hall*

Chair: Prof. İbrahim Kaya

- ID: 46. Design, Analysis and Experimental Application of a Fractional Sliding Mode Control for a Benchmark Process.**
Necdet Sinan Ozbek (Turkey).
- ID: 49. On Robust Control of Induction Motor with Multi-cell Inverter for PV Pumping Applications.**
Said Boudjana (Algeria), Mohamed Tadjine (Algeria), Bouziadi Belkacem (Algeria).
- ID: 94. Altitude backstepping control of quadcopter.**
Houcine Loubar (Algeria), Razika Zamoum Boushaki (Algeria), Yacine Aribi (Algeria), Abdellah Kouzou (Algeria)
- ID: 93. Automated Planning for Mobile Manipulators using passive RFID tags.**
Salim Djezairi (Algeria), Razika Zamoum Boushaki (Algeria), Isma Akli (Algeria), Brahim Bouzouia (Algeria), Abdellah Kouzou (Algeria).





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16h30 – 18h00 Oral Session 4 *İbn-i Sina Hall*

Chair: Prof. Eyyüp Öksüztepe

1. **ID: 33. Roll stability sliding mode control of an electric vehicle.**
Hassan Benariba (Algeria), Boumediene Abdelmadjid (Algeria).
2. **ID: 38. Regenerative Operation of 18/12 In-Wheel Switched Reluctance Motor for Electric Vehicle.**
Ufuk Kaya (Turkey), Eyyüp Öksüztepe (Turkey).
3. **ID: 42. An Evaluation of Model-Free Control Strategies for Quadrotor Type Unmanned Aerial Vehicles.**
Necdet Sinan Ozbek (Turkey).
4. **ID: 78. Integral Sliding Mode Control for Path Tracking of a Minirotorcraft Unmanned Aerial Vehicle.**
Mohammed Rida Mokhtari (Algeria), Amal Choukchou-Braham (Algeria), Brahim Cherki (Algeria).
5. **ID: 61. A Survey of Model Predictive Control Development in Automotive Industries.**
Asmaa Maher Sweif (Egypt), Amr El-Zawawi (Egypt), Mohamed El-Habrouk (Egypt).



19h00	Dinner
	Culture Park Music Activity will be presented by : Municipality Kürsübaşı Team

End of the First Day
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<p>08h30 – 09h30</p>	<p>Plenary Session 3 <i>İbn-i Sina Hall</i></p> <p>VARIABLE SPEED AC DRIVES WITH INVERTER OUTPUT FILTERS</p> <p><i>Professor Jaroslaw Guzinski</i> Gdansk University of Technology, Poland</p> <p>Chairs : Prof. Atif Iqbal and Prof. Sedat Sünter</p>
<p>09h40- 10h40</p>	<p>Plenary Session 4 <i>İbn-i Sina Hall</i></p> <p>MESHFREE ALTERNATIVE NUMERICAL METHODS FOR SUSTAINABLE ENGINEERING</p> <p><i>Professor Kamal Mohammedi</i> MESONexusTeam, Modelling, Simulation and Optimization of Alternative and Sustainable Systems, Faculty of Engineering, M. Bougara University, Boumerdès, Algeria</p> <p>Chair : Prof. Arif Gülten</p>
<p>10h40 – 11h00</p>	<p>Coffee break -3</p>
<p>11h10 – 12h10</p>	<p>Plenary Session 5 <i>İbn-i Sina Hall</i></p> <p>INFLUENCE OF FIFTH GENERATION (5G) TECHNOLOGIES ON SMART GRID DISTRIBUTED SERVICES</p> <p><i>Professor Zoran Bojkovic</i> University of Belgrade, Serbia</p> <p>Chairs : Prof. Youcef Soufi and Prof. Turgay Kaya</p>

12h20 – 14:00

Lunch



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14h00–15h30 **Oral Session 5** *Kaşgarlı Mahmud Hall*

Chair: Prof. Abdulkadir Şengür

- ID: 13.** *Digital Transformation Design of Banbury Mixing Unit in Tire Manufacturing.*
Abdullah Temel (Turkey), Murat Ayaz (Turkey).
- ID: 28.** *Wireless Elevator Call System Design With PSoC.*
Burak Tasci (Turkey), Yavuz Erol (Turkey).
- ID: 54.** *Deployment of Fog Computing Platform for Cyber Physical Production System Based on Docker Technology.*
Omar Abid (France), Imen Bouzarkouna (France), M'hammed Sahnoun (France), Bouziane Brik (France), David Baudry (France).
- ID: 77.** *UAV Coverage Path Planning For Supporting Autonomous Fruit Counting Systems.*
Adel Mokrane (Algeria), Amal Choukchou Braham (Algeria), Brahim Cherki (Algeria).
- ID: 83.** *A Single Observer for Currents Estimation in Sensor's Fault-Tolerant Control of Induction Motor Drives*
Younes Azzoug (Algeria), Remus Pusca (France), Mohamed Sahraoui (Algeria), Abdelkarim Ammar (Algeria), Raphaël Romary (France), Antonio J. Marques Cardoso (Portugal).



14h00 – 15h30 **Oral Session 6** *İbn-i Sina Hall* Chair: Prof. Güngör Yıldırım

- ID: 15.** *Fault Diagnosis Techniques for Electrical Powertrain System-A Review*
Dehbia Ouamara (Algeria), Ahmed Chaibet (France), Moussa Boukhnifer (France), Ahmed Maldi (Algeria).
- ID: 31.** *Adaptive observer based sensor fault detection, isolation and reconfiguration for IM.*
Mohammed Zakaria Kari (Algeria), Abdelkader Mechernene (Algeria), Sidi Mohammed Meliani (Algeria), Ibrahim Guenoune (Algeria).
- ID: 44.** *Speed Sensor Fault-Tolerant Controller for Induction Motor Using New Minimum Probability Voter Based on Signal Strength.*
Fadi Alyoussef (Turkey), Ahmad Akrad (France).
- ID: 52.** *Monitoring of Leakage Flux for Rotor Fault Detection under non-adjacent broken rotor bars in Induction Motors.*
Taner Goktas (Turkey), İmran Ekinci (Turkey), Nihat Yüklü (Turkey), Müslüm Arkan (Turkey), Mehmet Salih Mamiş (Turkey)
- ID: 56.** *Diagnosis of systems using linear hybrid automata models.*
Thiziri Boumezirene (Algeria), Latefa Ghomri (Algeria).

15h30 – 15:45

Coffee Break - 4



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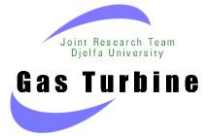
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15h45 – 17h00 **Oral Session 7** *Kaşgarlı Mahmud Hall*

Chair: Prof. Ömür Aydoğmuş



1. **ID: 12.** *Takagi-Sugeno modeling of Stand-alone photovoltaic system based fuzzy c-means clustering algorithm.*
Nassim sabri (Algeria), Abdelhalim Tlemçani (Algeria), Aissa Chouder (Algeria), Walid Merrouche (Algeria).
2. **ID: 19.** *Optimization of medium voltage load break switchgear using multiple objective evolutionary algorithms.*
Hakan Ates (Turkey), Gazi Erkan Bostancı (Turkey), Mehmet Serdar Güzel (Turkey).
3. **ID: 73.** *Artificial Neural Network-Genetic Algorithm based Prediction of Metformin Diffusion from Transdermal Films Based on Biopolymers for Diabetes Disease Treatment.*
Samia Rebouh (Algeria), Sonia Lefnaoui (Algeria), Mounir Bouhedda (Algeria), M. Mediha Yahoum (Algeria).
4. **ID: 74.** *Profit Analysis and Optimization in a Deregulated Electricity Market Using DCOPF Based LMP.*
Riyadh Bouddou (Algeria), Farid Benhamida (Algeria), Moussa Belgacem (Algeria).
5. **ID: 25.** *Aggregate modeling of scheduling multiproduct pipeline system with constrains of multi-pumps.*
Wassila Abdellaoui (Algeria), Mehdi Souier (Algeria), M'hammed Sahnoun (France), Mohammed Dahane (France).



15h45 – 17h00 **Oral Session 8** *İbn-i Sina Hall*

Chair: Prof. Turgay Kaya

1. **ID: 22.** *Numerical simulation of the barrier effect on the electric field distribution in arrangement point-plane air gaps in positive impulse voltage.*
Abdelghani Rouini (Algeria), Ahmed Hafaiha (Algeria), Messaouda Larbi (Algeria), Abdellah Kouzou (Algeria)
2. **ID: 41.** *Empirical Observations on LoRa Performance for Different Environments.*
Gürkan Doğan (Turkey), Güngör Yıldırım (Turkey), Yetkin Tatar (Turkey).
3. **ID: 67.** *Greenhouse Monitoring and Fuzzy Control System based on WSN and IoT.*
Hamza Benyezza (Algeria), Mounir Bouhedda (Algeria), Nesrine Faci (Algeria), Manel Aissani (Algeria), Samia Rebouh (Algeria).
4. **ID: 81.** *The effect of AGVs number on a flexible manufacturing system.*
Fethi Achouri (Algeria), Mehdi Souier (Algeria).
5. **ID: 88.** *Real Time Edge Detection via IP-Core based Sobel Filter on FPGA.*
Sertaç Yaman (Turkey), Barış Karakaya (Turkey), Yavuz Erol (Turkey).



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17 h 05 – 18h 15	<p><i>Yusuf Has Hacip Hall</i></p> <p>Workshop On CONTEMPORARY TOPICS ON SMART GRIDS</p> <p><i>Professor Zoran Bojkovic</i> University of Belgrade, Serbia</p> <p>Chair : Prof. Sedat Sünter</p>
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19h00	Dinner
	FÜ Cultural Center Music Activity will be presented by: Conservatory Music graduate Students (Aygun Cam and Team)

End of the Second Day
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Third Day
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09h00 – 17h00	Excursion Visiting Harput and Keban Dam
	Tea-Coffee Break and Lunch During Excursion



Social Excursion Program

(Available for Registration on Desk)



9:00	<i>Departure to Keban Town</i>
9:45	<i>Visiting Çırçır Waterfall</i>
10:15	<i>Visiting Keban Dam (Turkey's second biggest dam)</i>
12:00	<i>Lunch at Firat Alabalık Restourant and Tea-Coffee break</i>
12:20	<i>Moving to Mosque for those Who want to attend the Friday Prayer</i>
13:30	<i>Departure from Keban town to old city Harput town</i>
14:30	<i>Visit for Sara Hatun Mosque, Turkish Hammam, Local Handicrafts Bazaar</i>
15:00	<i>Visiting Ulu Mosque (Great Mosque)</i>
15:30	<i>Visiting Harput Castle</i>
16:00	<i>Visiting “Şefik Gül “ House which is redecorated as old Harput House. - Catering (Patiala, ayran and tea)</i>
17:00	<i>View of the city from the Balak Gazi</i>
18:00	<i>Departure to Hotels</i>



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